

Application No.: 10/681,086
Amendment Dated: January 8, 2009
Reply to Office Action of: July 9, 2008

AMENDMENTS TO THE CLAIMS

LISTING OF CLAIMS:

Claims 1-22 (cancelled).

Claim 23 (Currently Amended): A process for decoupling production of a target fermentation product from biomass production in a fermentation medium comprising:

(a) providing a recombinantly produced microorganism from the genus *Bacillus* that has been engineered to contain a polynucleotide sequence which encodes biosynthetic enzymes for said target fermentation product,

(b) introducing a mutation causing a biotin auxotrophy into the biotin (bio) biosynthetic operon of the microorganism to control biomass production and which does not compromise the ability of the microorganism to produce said target fermentation product, and

(c) supplying the medium with an unlimited amount of substrates required for the production of said target fermentation product and with a limited amount of biotin complementing the auxotrophy;

wherein said target fermentation product is riboflavin.

Claim 24 (Currently Amended): A The process according to claim 23 wherein step (b) comprises introducing a polynucleotide comprising a deletion-insertion mutation into the genome biotin (bio) biosynthetic operon of the microorganism to disrupt the microorganism's ability to produce biotin.

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Claim 25 (Currently Amended): A The process according to claim 24 wherein the polynucleotide comprises deletion-insertion mutations within a *bioFDB* gene cassette.

Claim 26 (Currently Amended): A The process according to claim 23 wherein the introducing step comprises transforming the microorganism with a polynucleotide sequence comprising a *bioFDB* deletion-insertion mutation.

Claim 27 (Currently Amended): A The process according to claim 26 comprising transforming the microorganism with a polynucleotide sequence comprising SEQ ID NO:1.

Claim 28 (Currently Amended): A The process according to claim 27 further comprising selecting for transformation of the microorganism.

Claim 29 (Currently Amended): A The process according to claim 28 wherein selecting for the transformation comprises selecting for antibiotic resistance.

Claim 30 (Currently Amended): A The process according to claim 29 wherein selecting for the transformation comprises selecting for neomycin resistance.

Claim 31 (cancelled).

Claim 32 (original): A production microorganism made by the process of claim 23.

Claims 33-40 (cancelled).

Claim 41 (New). The process according to claim 23 wherein the mutation causing the biotin auxotrophy is in *bioW*.

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Claim 42 (New). The process according to claim 23 wherein the mutation causing the biotin auxotrophy is in *bioA*.

Claim 43 (New). The process according to claim 23 wherein the mutation causing the biotin auxotrophy is in *bioF*.

Claim 44 (New). The process according to claim 23 wherein the mutation causing the biotin auxotrophy is in *bioD*.

Claim 45 (New). The process according to claim 23 wherein the mutation causing the biotin auxotrophy is in *bioB*.